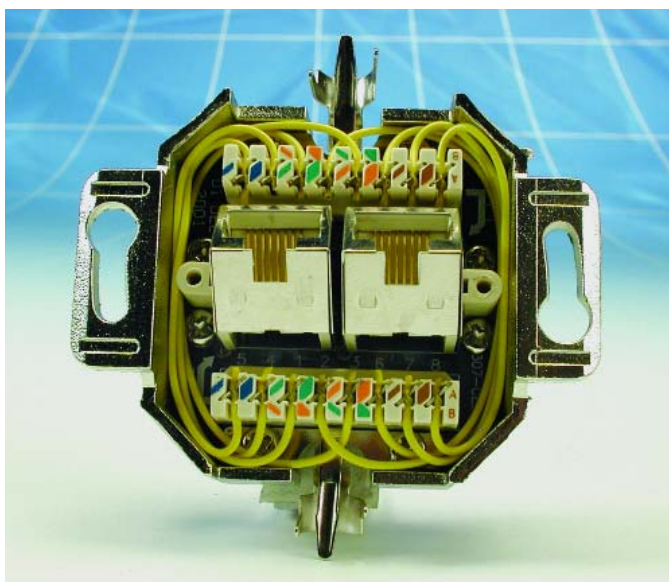


Cross-linking with Two Patch Cables

038



L. Lemmens

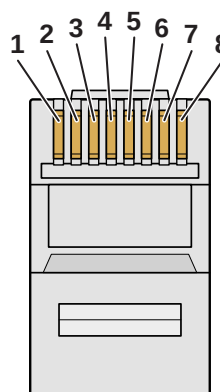
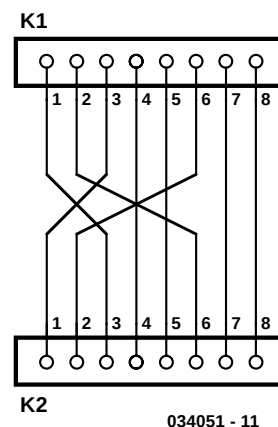
In networks, the supremacy of coax cable is a thing of the past. Nowadays, Ethernet connections are made using UTP cables. The BNC plug has yielded to the 8-way RJ45 plug. Previously, coax cables were daisy-chained from computer to computer and terminated at the two ends using 50- Ω resistors, but modern networks use central 'socket boxes' (switches and/or hubs) to interconnect everything. The connections between the hubs and the computers are made using patch cables having the same sequence of leads in the RJ45 connectors at each end. For making a direct connection between two computers without using a hub or switch, a 'crossover cable' is used. Such a cable has the leads cross-linked in order to allow the two computers to directly communicate with each other.

If there are problems with the network, it can be handy to be able to directly interconnect two computers, or directly connect a computer to a cable or ADSL modem without using a hub or switch. A long crossover cable is not always available, and shoving around computers is not an attractive alternative. Consequently, we can use a dual RJ45 wall outlet box to construct an adapter, which can be used to interconnect the two patch cables coming from the equipment in question. This outlet box must be wired to create a cross-linked connection. This

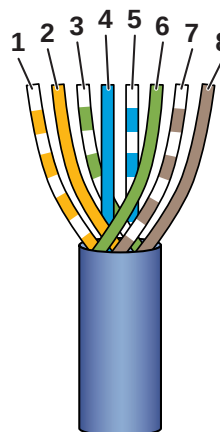
is done by making the following internal connections:

- 1 $\rightarrow$ 3
- 2 $\rightarrow$ 6
- 3 $\rightarrow$ 1
- 4 $\rightarrow$ 4
- 5 $\rightarrow$ 5
- 6 $\rightarrow$ 2
- 7 $\rightarrow$ 7
- 8 $\rightarrow$ 8

(034051-1)



- 1: white/orange TX+
- 2: orange TX-
- 3: white/green RX+
- 4: blue
- 5: white/blue
- 6: green RX-
- 7: white/brown
- 8: brown



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